

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	§	Group Art Unit: <b>2168</b>
<b>Stephen Fife Sheldon</b>	§	
	§	
Serial No.: <b>10/800,493</b>	§	
	§	Examiner: <b>Sanders, Aaron J.</b>
Filing Date: <b>March 15, 2004</b>	§	
	§	
Title: <b>Simple Expression Modification</b>	§	Attorney. Docket No.: <b>11466</b>
<b>in a SQL Query</b>	§	

## MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents  
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37 CFR 1.8

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/Howard L. Speight/ Reg. No. 37,733  
Howard L. Speight

DATE OF SUBMISSION: **APRIL 2, 2009**  
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Dear Sir:

## APPELLANT'S REPLY BRIEF (37 C.F.R. § 41.41)

This Reply Brief is submitted in response to the Examiner's Answer mailed on February 2, 2009.

## CLAIMS APPENDIX

Appellant agrees with the correction to the claims appendix described in the Claims Appendix portion of the Examiner's Answer. See Examiner's Answer at 3.

## ARGUMENT

### **A. The 35 USC 112 first paragraph rejections of claims 1, 15, and 29 should be reversed because it is contrary to Federal Circuit precedent.**

The Final Office Action rejected claims 1, 15, and 29 under 35 USC 112, first paragraph, as failing to comply with the enablement requirement, arguing that “the limitations ‘performing further query optimization to produce a result’ and ‘saving the result in a memory’ do not appear in the specification.” Final Office Action at 3 (emphasis in original). Appellant argued in its Appeal Brief that the two elements are supported by the specification and by what would be known by one of ordinary skill in the art.

The Examiner’s Answer argued that “[o]ne of ordinary skill in the art reading the claims would not know that ‘performing further query optimization to produce a result’ actually means performing query optimization to produce executable steps” and that “more likely, an artisan would assume that the ‘result’ is the set of answers to the optimized query.” Examiner’s Answer at 24. It is clear in the claims, however, that the result is the product of further query optimization. See, e.g., claim 1 (“performing further query optimization to produce a result”). It is also clear from the specification, as described in Appellant’s Appeal Brief, that one example of a result of the further query optimization is the “executable steps” 325 shown in Fig. 3.

The argument in the Examiner's Answer appears to be that enablement is based solely on a reading of the claims by a person of ordinary skill in the art. Examiner's Answer at 24 (“[o]ne of ordinary skill in the art reading the claims . . .”) This is contrary to the law. The Federal Circuit has held that “[t]he ‘enablement requirement is satisfied when one skilled in the art, after reading the specification, could practice the claimed invention without undue experimentation.’” *Sitrick v. Dreamworks, LLC*, 516 F.3d 993, 999 (Fed. Cir. 2008)(quoting *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1238-39 (Fed. Cir. 2003))(emphasis added). Thus, the enablement requirement assumes that one skilled in the art has access to the specification and is not limited to the claims. The argument in the Examiner's Answer on this point should be rejected.

The Examiner's Answer argued that “saving the result in a memory” is not enabled because it “does not appear in the specification.” Examiner's Answer at 24. The position is contrary to Federal Circuit law, which states that the scope of enablement is not limited to what is disclosed in the specification; it also includes “what would be known to one of ordinary skill in the art without undue experimentation.” *Abbott Labs v. Andrx Pharmaceuticals, Inc.*, 452 F.3d 1331, 1341 (Fed. Cir. 2006), citing *Invitrogen Corp. v. Clontech Labs., Inc.*, 429 F.3d 1052, 1070-71 (Fed. Cir. 2005). The Examiner's Answer does not contest that a person of ordinary skill would understand that the “executable steps” described

above as an example of a “result” may be saved in a memory. Thus, the “saving the result in a memory” element is enabled.

The rejection of claims 1, 15, and 29 under 35 USC 112, first paragraph, should be reversed.

**B. The 35 USC 101 rejections of claims 1, 7-14, 29, and 35-42 should be reversed because the section 101 rejection rests on the enablement rejection and because the claims satisfy the machine-or-transformation test.**

The Final Office Action rejected all pending claims under 35 USC 101 arguing that the claimed invention is directed to non-statutory subject matter relying on the discredited “useful, concrete and tangible result” test. Final Office Action at 4. The Examiner’s Answer withdrew the rejections of claims 15 and 21-28 under 35 USC 101 but continued to press the rejections of claims 1, 7-14, 29, and 35-42. Examiner’s Answer at 4-5 and 25.

The argument in the Examiner’s Answer rests on the enablement rejection. See Examiner’s Answer at 25 (“the limitation ‘produce a result’ is not enabled”). Applicant has demonstrated above that the “produce a result” limitation is enabled. Therefore, this basis for the rejection under section 101 should be rejected.

Further, the claims comply with *Bilski’s* machine-or-transformation test. Independent claims 1 and 29 (and independent claim 15, which is not rejected under section 101) describe producing a result and storing the result in memory.

Thus, these claims recite transforming the memory, which would be understood by persons of ordinary skill to be a physical device, from one in which a result is not stored to one in which a result is stored. Writing the result on a piece of paper, as the Examiner's Answer suggests at 5, is not the same thing as storing the result in a memory.

With respect to the argument in the Examiner's Answer that claim 29 "is not a proper system claim because the recited process is not tied to the CPUs or data storage facilities," Examiner's Answer at 25, claim 29 requires that the process run on the massively parallel processing system ("a process for execution on the massively parallel processing system"). The claim further requires that the massively parallel processing system include CPUs and data storage facilities ("the massively parallel processing system including . . . a plurality of CPUs [and] . . . a plurality of data storage facilities"). These requirements form the tie between the process and the CPUs and data storage facility that the Examiner's Answer says is missing.

The remaining claims rejected under 35 USC 101 (claims 7-14 and 35-42) depend from one of independent claims 1 and 29 and satisfy section 101 for at least the same reasons.

For all these reasons, the rejections of claims 1, 7-14, 29, and 35-42 should be reversed.

**C. The rejections of claims 1, 7-9, 11-13, 15, 21-23, 25-27, 29, 35-37 and 39-41 over Paulley in view of Warner should be reversed because Warner does not teach (a) the second node representing the constant 0 and (b) removing the parent node and its children from the tree structure.**

The Final Office Action rejected claims 1, 7-9, 11-13, 15, 21-23, 25-27, 29, 35-37, and 39-41 under 35 USC 103(a) as being unpatentable over United States Patent No. 6,665,664 (“hereinafter Paulley”) in view of United States Patent Publication No. 2005/0055338 (hereinafter “Warner”). Final Office Action at 5.

The relevant limitations from independent claim 1 are (independent claims 15 and 29 contain similar limitations):

determining that the second child node represents the constant 0 and  
that the parent node represents an arithmetic operation selected  
from the group consisting of addition and subtraction; and  
in response, removing the parent node and its children from the tree  
structure and inserting the first child node in its place.

Neither Warner nor Paulley teach either of these elements. The Final Office Action admitted that Paulley does not teach either element and argued that Warner teaches both elements. See Final Office Action at 16.

**1. Warner does not teach “removing the parent node and its children from the tree structure.”**

Warner does not teach “removing the parent node and its children from the tree structure and inserting the first child node in its place,” as required by independent claims 1, 15, and 29. The Examiner’s Answer argues that this

element is shown in Warner's Fig. 3C: "Fig. 3C shows that the value 3 (element 314) replaces the subtree 1 + 2 and becomes a child node of node 302." Examiner's Answer at 26. Appellant respectfully disagrees.

First, Warner's subtree 1 + 2 (element 308) is not removed, as required by independent claims 1, 15, and 29. Element 308 is still clearly shown in Fig. 3C.

Second, element 314 is not a node on the tree, as the Examiner's Answer suggests. It is a storage location. See Warner at [0050], line 8. Fig. 3C appears to use ovals for nodes on the tree (e.g., 302, 304, 306) and rectangles for storage locations (e.g. 310, 312, 314, and 316). See Warner at ¶ [0050].

**2. Warner does not teach "determining that the second node represents the constant 0."**

Further, Warner does not teach "determining that the second child node represents the constant 0," as required by independent claims 1, 15, and 29. The Advisory Action admitted for the first time that Warner does not "explicitly teach 'that the second child node represents the constant 0,'" but nevertheless argued that this element is obvious because "the functionality is not patentably distinct." Advisory Action at 2. Neither the Advisory Action nor the Examiner's Answer provides any factual support for the "not patently distinct" argument. Thus, the fact remains that the Examiner has admitted that neither Warner nor Paulley teach

“the second node represents the constant 0” element. The rejection of the claims under 35 USC 103(a) should be reversed on this basis alone.

Thus, the Final Office Action’s combination of Paulley and Warner is missing at least two elements required by independent claims 1, 15, and 29 and those claims are patentable over that combination. The remaining claims rejected under the Final Office Action’s combination of Paulley and Warner (claims 7-9, 11-13, 21-23, 25-27, 35-37, and 39-4) depend from one of claims 1, 15, and 29 and are patentable for at least the same reasons.

For these reasons, 1, 7-9, 11-13, 15, 21-23, 25-27, 29, 35-37, and 39-41 under 35 USC 103(a) should be reversed.

**D. The rejections of claims 10, 14, 24, 28, 38, and 42 over Paulley in view of Warner and further in view of Nuutila should be reversed.**

The Final Office Action rejected claims 10, 14, 24, 28, 38, and 42 under 35 USC 103(a) as being unpatentable over Paulley in view of Warner and further in view of Esko Nuutila, “Transitive Closure,” Helsinki University of Technology, (October 9, 1995)(hereinafter “Nuutila”). Final Office Action at 18. While neither the Final Office Action nor the Advisory Action stated that Warner was included in the combination, Appellant assumed that it was. The Examiner’s Answer made it clear that Warner is included in the combination.

Appellant stands by its arguments in Appellant’s Appeal Brief.



**E. The drawings are adequate.**

Applicant stands by its arguments concerning the drawings contained in Appellant's Appeal Brief.

**SUMMARY**

In light of the foregoing, Appellant respectfully requests that the final rejection of the pending claims should be reversed and the application be remanded for allowance of the pending claims, or, alternatively, the application be remanded for further examination if appropriate references can be found by the examiner.

Appellant submits that no fee is due with the filing of this Reply Brief. Should any fees be required, Applicant requests that the fees be debited from deposit account number 50-4370.

Respectfully submitted,

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